

CONSTRUCTION VALUE ENGINEERING CONCEPT PROPOSAL
MISSOURI DEPARTMENT OF TRANSPORTATION

Date 04/15/09

RECEIVED
MAY 11 2009
Construction & Materials - ECR

Contract ID 090123-303 Job No. J3P2146 & J3P2146C
County Lincoln Route 61 & U Original Bid Cost \$8,374,042.13
Contractor Iron Mountain Construction Services By Chris A. Wilmes
Designed By MODOT Phone (636) 978-9835

VECP 09-26

1. Description of existing requirements and proposed change(s). Advantages/Disadvantages

Existing:

Construct Phases I and IV as shown on Job J3P2146 plans.

Reduce NB and SB Rte 61 to 2 - 10-foot wide lanes utilizing temporary striping and temporary traffic barrier.

Proposed:

Construct the widening along Rte 61 shown in Phases I & IV for Ramps 1 & 3 and Ramps 2 & 4 utilizing a lane closure over a weekend. The lane closure would begin on Friday night allowing continuous construction until completion and reopening sometime prior to Monday morning. We anticipate two weekends for Phase I and one weekend for Phase IV.

2. Estimate of reduction in construction costs. \$110,000.00

MoDOT Savings - \$55,000.00

Iron Mountain Savings - \$55,000.00

(See attached spreadsheet with quantity adjustments)

3. Prediction of any effects the proposed change(s) will have on other department costs, such as maintenance and operations.

Elimination of the narrow lanes (2 - 10' lanes) during Phases I & IV construction operations will make the project safer for the traveling public. The existing lanes will remain 12' wide except during the lane closures on weekends.

Temporary striping and removal of existing stripes has a tendency to create maintenance issues during and after the completion of phasing. Shadows of old markings will remain, marring the pavement upon completion. Tape removal marks as well as grind marks will be visible.

4. Anticipated date for submittal of detailed change(s) of items required by Section 104.6 of the Specifications.

None

(date)

5. Deadline for issuing a change order to obtain maximum cost reduction, noting the effect of contract completion time or delivery schedule.

04/24/09 Need to order materials and schedule work

(date)

(effect)

6. Dates of any previous or concurrent submission of the same proposal.

N/A

(date and/or dates)

Additional Comments:

With proper notification and planning, performing operations of this nature on weekends to expedite certain operations and minimize exposure to traffic can be very successful and safe. Lane closures can have less impact outside the work week. Starting this operation on a Friday night and completing prior to Monday morning commuter traffic should provide less impact to the traveling public. In St. Charles County we performed a very similar operation when constructing the ramps at Rte I-70 and Hwy 94. Maintaining two twelve foot lanes of traffic during non working hours will improve the safety within this work zone. The intersections of Mette Road and Rte U at Hwy 61 provide enough challenges without maneuvering through 10' lanes. Temporary striping and removals has a tendency to create maintenance issues. Shadows of old markings remain from grinding and residue from tape removal will also be visible. The existing surface of Rte 61 does not receive an overlay upon completion to eliminate these markings. If elimination of the compacting in cut is a concern, the attached spreadsheet shows a reduced savings if 8 inch thick rock base is substituted for 4 inch thick Type 5 Base. IMCC will be willing to consider alternative methods for the base if necessary.

**** Portion Below This Line To Be Filled Out By MoDOT ****

Comments:

SEE ATTACHED SHEET. APPROVAL RECOMMENDED

Joseph Ferraro
Submitted by Resident Engineer

04/28/09
Date

Comments:

Agree with RE comments - This VE will result in less exposure for traffic to narrow lanes with barrier which is a big plus. Also we will hopefully speed up project, get same product, at less cost.

☒ Approval
☐ Recommended

Mary Rodenbury DCME

4/28/09

☐ Rejection
☐ Recommended

District Engineer *For Paula Gough*

Date

Comments:

Approved based on comments and recommendations above.

☒ Approval
☐ Rejection

David D. Gough

5-11-09

State Operations Engineer

Date

ok Dug 5/7/2009

Distribution:

Resident Engineer, District Operations Engineer, State Operations Engineer

* Value Engineering Administrator - * MoDOT, P.O. Box 270, Jefferson City, MO 65102

Value Engineering Proposal Modified Phase I and IV Traffic Control and Construction Plan Route 61 U - J3P2146 Project
 Estimated Quantities and Savings

Line Item	Description	Units	Plan Quantity	Unit Price	Revised Quantity	Unit Price	Total Savings
0080	Compacting in Cut	Sia	47.30	\$100.00	16.00	\$100.00	\$3,130.00
0510	Temporary Concrete Traffic Barrier, Type F	LF	3,715.00	\$30.00	800.00	\$30.00	\$87,450.00
0520	Relocating Temporary Concrete Traffic Barrier	LF	1,270.00	\$7.00	0.00	\$7.00	\$8,890.00
0370	Impact Attenuator (14 Sand Barrels)	EA	4.00	\$3,500.00	4.00	\$3,500.00	\$0.00
0390	Relocation Impact Attenuator (14 Sand Barrels)	EA	6.00	\$500.00	0.00	\$500.00	\$3,000.00
0580	Preformed Removable Marking Tape 4 IN., White	LF	22,321.00	\$1.10	0.00	\$1.10	\$24,553.10
0680	Pavement Marking Removal	LF	22,321.00	\$0.25	0.00	\$0.25	\$5,580.25
0690	Misc. 3M Stannark Removable Black Line Mask	LF	2,841.00	\$2.43	0.00	\$2.43	\$6,903.63
0680	Pavement Marking Removal	LF	2,841.00	\$0.25	0.00	\$0.25	\$710.25
0420	Construction Signs (Removal of Narrow Lanes)	SQFT	1,268.68	\$15.00	1,236.68	\$15.00	\$480.00
0540	Pavement Edge Treatment	LF	3,328.00	\$3.35	4,528.00	\$3.35	(\$4,020.00)
New	Plant, Crew, & Truck Premium Time	LS	0.00	\$0.00	1.00	\$25,000.00	(\$25,000.00)

VE Savings to be shared (50/50)

\$111,677.23

Total Savings - MoDot

\$55,838.62

Total Savings - Fred Weber, Inc.

\$55,838.62

Substitute 8 Inch Rock Base for Compacting in Cut & 4 Inch Type 5 (if required)

0120	Type 5 Aggregate Base (4IN)	SY	33,462.00	\$4.50	22,311.60	\$4.50	\$50,176.80
NBW	8 IN. Rock Base	SY	0.00	\$0.00	11,150.40	\$7.05	(\$78,610.32)

(\$28,433.52)

VE Savings to be shared (50/50) w/8 Inch Rock Base alternative

\$83,243.71

Total Savings - MoDot

\$41,621.86

Total Savings - Fred Weber, Inc.

\$41,621.86

Route 61, Lincoln County

J3P2146

VE #2, Modified Phase I and IV Traffic Control and Construction Plan

Lane closure during weekends to perform Phase 1 and 4 ramp construction will result in far less inconvenience to motorists. The VE proposal provides traffic with one 12' wide lane over a couple of weekends compared to traffic control plans, which would require two 10' wide lanes for several months duration reducing exposure to traffic to reduced lane widths.

District and division traffic have provided hourly volumes requiring both lanes of Route 61 to remain open to traffic during the weekend as shown;

SB Rte 61 - Saturday, between 5:00 and 9:00 AM

Sunday, between 6:00 and 9:00 AM

NB Rte 61 - Saturday, between 2:00 and 7:00 PM

Sunday, between 2:00 and 7:00 PM

The proposed 8" rock base will be substituted for plan requirements of compacting in cut and 4" aggregate base. The contractor is also working on proposal to coldmill either 6" or 8" of asphalt and place an unbonded PCCP overlay for taper and decel lane of Ramp 3.

The estimated cost savings is being revised at this time from the attached. We expect the revised VE savings would be approximately \$32,000 to \$36,000.

J.J.
04/28/09

VALUE ENGINEERING CHECK SHEET

TYPE OF WORK

(Check one that applies)

- ☐ Bridge/Structure/Footings
- ☐ Drainage Structures (RCP, RCB, CMP's, ect.)
- ☒ TCP/MOT
- ☐ Paving (PCCP, ect.)
- ☐ Grading/MSE Walls
- ☐ Signal/Lighting/ITS
- ☐ Misc. Acceleration of Work

SUMMARY OF PROPOSAL

(If needed, condense summary to a couple of lines)

This VE involves closing a lane on weekends to allow for night work and completion of the project over the weekend.

SCANNING OF DOCUMENT

If the proposal is large, please mark or make note, which pages need to be scanned into the database. If there are special instructions, make note of them here.
